

Title (en)
SYNCHRONOUS DC-DC CONVERSION

Title (de)
SYNCHRONE GLEICHSTROM-GLEICHSTROM-UMWANDLUNG

Title (fr)
CONVERSION CC-CC SYNCHRONE

Publication
EP 2678929 A1 20140101 (EN)

Application
EP 12749974 A 20120221

Priority
• AU 2011900603 A 20110222
• AU 2012000156 W 20120221

Abstract (en)
[origin: WO2012113015A1] A synchronous DC-DC converter (300) for converting an input voltage (Vin) into an output voltage (Vout), the converter having a continuous current operative mode (CCM) and a discontinuous current operative mode (DCM), the converter including: an active switch (302) receiving a first gate signal for turning on the active switch for a first time interval (Tq1), the first gate signal having a period (Tprd); a synchronous rectifier (304) receiving a second gate signal for turning on the synchronous rectifier for a second time interval (Tq2); and a controller (306) for determining an estimation (Tq1est) for the first time interval, and thereafter comparing the estimation (Tq1est) with the value of the first time interval (Tq1); wherein responsive to the comparison the controller (306) determines an operative mode of the converter (300) and controls the second time interval (Tq2) depending on the determined operative mode.

IPC 8 full level
H02M 3/158 (2006.01)

CPC (source: EP US)
H02M 3/156 (2013.01 - EP US); **H02M 3/157** (2013.01 - EP US); **H02M 3/1588** (2013.01 - EP US); **Y02B 70/10** (2013.01 - EP US)

Cited by
TWI822344B; EP4152585B1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2012113015 A1 20120830; AU 2012220342 A1 20130502; AU 2012220342 B2 20140925; CA 2827982 A1 20120830; CA 2827982 C 20191203; EP 2678929 A1 20140101; EP 2678929 A4 20180404; EP 2678929 B1 20210324; ES 2864763 T3 20211014; US 2014043004 A1 20140213; US 9531273 B2 20161227

DOCDB simple family (application)
AU 2012000156 W 20120221; AU 2012220342 A 20120221; CA 2827982 A 20120221; EP 12749974 A 20120221; ES 12749974 T 20120221; US 201214000794 A 20120221